

### **REMARKS/ARGUMENTS**

These remarks are made in response to the Office Action of February 15, 2008 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. However, the Examiner is expressly authorized to charge any deficiencies to Deposit Account No. 50-0951.

#### **Claims Objections**

Claims 1 and 4 were objected to due to informalities.

Appropriate correction has been made.

#### **Specification**

The term "Java" has been amended to "J A V A" as suggested by the Examiner.

#### **Claims Rejections – 35 USC § 101**

Claim 20 was rejected under 35 U.S.C. § 101.

Claim 20 has been cancelled.

#### **Claims Rejections – 35 USC § 103**

Claims 1, 3-11, 13, and 15-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,122,664 to Boukobza, *et al.* (hereinafter Boukobza) in view of "A Mobile-Agent-Based PC Grid", by Munehiro Fukuda (hereinafter Fukuda). Claims 2 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Boukobza in view of Fukuda, and in further view of "Design and Evaluation of Resource Selection Framework for Grid Application," by Ian Foster (hereinafter Foster). Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Boukobza in view of Fukuda, and in further view of U.S. Patent 6,681,243 to Putzolu (hereinafter Putzolu).

Although Applicants respectfully disagree with the claim rejections, Applicants have amended the claims so as to expedite prosecution of the present application. It is expressly noted, however, that the amendments should not be interpreted as the surrender of any subject matter. Accordingly, Applicants respectfully reserve the right to present the original version of any of the amended claims in any future divisional or continuation applications from the present application.

Applicants have amended independent Claims 1 and 8 to further emphasize certain aspects of the invention. As discussed herein, the claim amendments are fully supported throughout the Specification. No new matter has been introduced by the claim amendments.

#### *Aspects of Applicants Invention*

It may be helpful to reiterate certain aspects of Applicants' invention prior to addressing the cited references. One embodiment of the invention, as typified by amended Claim 1, is a method for restricting resources consumed by ghost agents within a grid computing environment.

The method can include identifying a host, wherein the host is a software object operating within a grid environment and movable from one grid to another grid within the grid environment. According to the method, the ghost agent can be associated with the host and be configured to execute at least one operation, including replicating and recording at least one action of the host, and to follow the movement of the associated host. See. e.g., paragraphs [0026], [0027], and [0040].

The method also can include identifying computing resources used by the ghost agent; determining a usage value for each computing resource used by the ghost agent; and calculating a resource utilization value for the ghost agent based on usage values determined for individual computing resources. See. e.g., paragraphs [0045] to [0047].

The method further can include comparing the resource utilization value to a usage threshold value pre-established for the ghost agent, wherein the usage threshold value defines a maximum resource utilization value permitted; and reducing a quantity of the computing resources used by the ghost agent if it is determined that the resource utilization value exceeds the usage threshold value. See. e.g., paragraphs [0047] and [0021].

**The Claims Define Over the Cited References**

Boukobza discloses a process for monitoring a plurality of object types of a plurality of nodes from a manager node in a data processing system by distributing configured agents. Boukobza does not disclose identifying computing resources used by the ghost agent; determining a usage value for each computing resource used by the ghost agent; calculating a resource utilization value for the ghost agent based on usage values determined for individual computing resources; comparing the calculated resource utilization value to a usage threshold value pre-established for the ghost agent; and reducing a quantity of the computing resources used by the ghost agent if it is determined that the resource utilization value exceeds the usage threshold value, as recited in Claims 1 and 8 of the instant application.

Col. 2, lines 30-35 of Boukobza discloses that each autonomous agent comprises a plurality of specific modules specific to the different object types, wherein each specific module measures static and dynamic parameters specific to the object type it monitors and collects these measurements and tests conditions on these parameters relative to predefined thresholds. As this passage clearly reveals, Boukobza has nothing to do with restricting resources consumed by a ghost agent within a grid computing environment. The term "threshold" mentioned in this portion of Boukobza has nothing to do with the usage threshold value pre-established for the ghost agent, recited in the claims. In

Applicants' claims , the usage threshold value is established to be compared with calculated resource utilization value for the ghost agent in order to decide when to reduce the quantity of the computing resources used by the ghost agent. In contrast, in Boukobza the "thresholds" are predefined for the object type (host) in order to test conditions on the parameters specific to the object type the ghost agent monitors, not for the ghost agent.

The other passages, such as col. 2, lines 49-51, col. 3, lines 21-24, and col. 5, lines 2-4 and 23-29, cited in the Office Action do not appear to have any relevancy to the limitations of the present invention as claimed.

Fukuda discloses a mobile-agent-based PC grid in which each mobile agent represents a client user, carries his/her job request, searches for resources available for the request, executes the job at suitable computers, and migrates it to others when the current ones have become unavailable for use (see page 1, col. 1, lines 6-10). Since Fukuda only discloses one type of agent, Fukuda cannot disclose moving the ghost agent from one grid to another grid in response to the moving of the host. In other words, in Fukuda the mobile agent does not follow the movement of its associated host (in fact, it does not have an associated host), but rather the mobile agent migrates from one computer to another computer depending on the availability of the computer.

Accordingly, the cited references, alone or in combination, fail to disclose or suggest each and every element of Claims 1 and 8, as amended. Applicants therefore respectfully submit that amended Claims 1 and 8 define over the prior art. Furthermore, as each of the remaining claims depends from Claim 1 or 8 while reciting additional features, Applicants further respectfully submit that the remaining claims likewise define over the prior art.

Applicants thus respectfully request that the claims rejections under 35 U.S.C. § 103 be withdrawn.

### CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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Date: April 14, 2008

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